

# PATENT ABSTRACTS OF JAPAN

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(54) COSMETIC

(57)Abstract:

PURPOSE: To obtain a cosmetic which is almost in no need of antiseptic agent and a preservative agent, having a reduced ethanol content with no skin irritation.

CONSTITUTION: The cosmetic contains ethanol in an amount of 5wt.% to 15-wt.% and at least one of carboxylic salts of 2 to 8 carbon atoms.

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DETAILED DESCRIPTION

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[Detailed Description of the Invention]

[0001]

[Industrial Application] This invention relates to the cosmetics of the ethanol low content without a skin stimulus which hardly need antiseptics and preservatives.

[0002]

[Description of the Prior Art] Conventionally, the approach of adding antiseptics and preservatives as an approach of preventing putrefaction of the cosmetics containing ethanol has been taken. however, the formula creation top of producing skin stimulation by this approach, if there are many amounts of antiseptics or preservatives, or weakening the emulsification stability of a system -- good -- since it was better, it had colander influence.

[0003]

[Problem(s) to be Solved by the Invention] Therefore, it is in the place made into the purpose of this invention offering the cosmetics of the ethanol low content without a skin stimulus which hardly need antiseptics and preservatives.

[0004]

[Means for Solving the Problem] This invention is attained by the cosmetics which blended 5 to 15% of the weight of ethanol, and at least one sort of the dicarboxylic acid salt of carbon numbers 2-8. Hereafter, the configuration of this invention is described.

[0005] The concentration which hardly needs the antiseptics which this invention means, and preservatives is 0 - 0.05% of the weight of the range on the basis of the total amount of cosmetics.

[0006] As a dicarboxylic acid salt used for this invention, if it is carbon numbers 2-8, any of saturation, partial saturation, and a side chain are sufficient, for example, a malonic-acid salt, a methylmalonic acid salt, succinate, a maleate, a fumaric-acid salt, glutamate, adipate, a pimelic-acid salt, a suberic acid, etc. are desirable. Specifically, methylmalonic acid Na, succinic-acid Na, maleic-acid Na, fumaric-acid Na, malonic-acid 2Na, glutamic-acid Na, adipic-acid Na, pimelic-acid Na, suberic-acid Na, etc. are mentioned.

[0007] As loadings of the dicarboxylic acid salt used for this invention, it is desirable to add 2.0% of the weight from 0.05 % of the weight on the basis of a cosmetics total amount, and it is desirable especially to add 1.0% of the weight from 0.1 % of the weight.

[0008] as the cosmetics of this invention -- a lotion, a milky lotion, a cream, and a hair tonic -- it passes, and, it passes and bitter taste ream etc. is mentioned. [ ant ]

[0009]

[Example] Before explaining to a detail with an example and the example of a comparison below, the approach of an antimicrobial-activity trial and a preservation-from-decay trial is explained.

[0010] (1) E.coli (Escherichia coli) was used for measurement of the preparation germicidal action of antimicrobial-activity test-method \*\* sample offering fungus liquid. Fixed period culture of this strain was carried out in the SCD liquid medium, and the bacillus suspension of a stationary phase was prepared.

[0011] \*\* After fixed period immersion, phase dilution was carried out and the smear of the measurement fungus liquid of number of microorganism was carried out to the ethanol solution (or thing which added the sample to the ethanol solution) of fixed concentration at plate agar. The colony was measured after 24-hour culture at 32 degrees C.

\*\* The germicidal action was measured for change of the number of micro organisms of a measurement month [ one month ] after [ a germicidal action ] against the index. A display as shown in Table 1 shows the number of micro organisms.

[0012]

[Table 1]

生菌数 個/ml	表示
10 <sup>6</sup> 以上	+++
10 <sup>4</sup> 以上 10 <sup>6</sup> 未満	++
10 <sup>2</sup> 以上 10 <sup>4</sup> 未満	+
10 <sup>2</sup> 未満	-

[0013] (2) E.coli (Escherichia coli), B.subtilis (Bacillus subtilis), St.aureus (Staphylococcus aureus), Ps.aeruginosa, (Pseudomonas aeruginosa), C.albicans (Candida bacillus-yeast), and Asp.niger (black mold-fungus) were used for measurement of the preparation germicidal action of preservation-from-decay force test-method \*\* sample offering fungus liquid. Fixed period culture of this strain was carried out in the SCD liquid medium (bacteria) and the malt extract liquid medium (yeast and fungus), and the bacillus suspension of a stationary phase was prepared.

[0014] \*\* It added a malt extract liquid medium and 0.2ml of SCD liquid media at a time to 10ml (or g) of trial preparations among the addition 20-ml test tube of the nutrient to a trial preparation, respectively.

\*\* You could add 0.025ml of fungus liquid of each above at a time to the trial preparation of the nutrient addition prepared by inoculation \*\* of the fungus liquid to a trial preparation, and it agitated, and sealed and saved.

\*\* It diluted with pure water suitably after fixed period preservation 32 degrees C of judgments of the preservation-from-decay force, and the smear was carried out to SCD plate agar and a malt-agar culture medium. For two days, after culture, the existence of growth of a bacillus was observed and the survival of the trial bacillus in a sample was checked at 32 degrees C.

[0015] It explains to a detail with an example and the example of a comparison below.

[0016] As an example 1 sample-offering sample, malonic-acid Na of carbon numbers 2-8, succinic-acid Na, methylmalonic acid Na, maleic-acid Na, fumaric-acid Na, glutaric-acid Na, glutamic-acid Na, adipic-acid Na, pimelic-acid Na, and suberic-acid Na were used. pH when adding 0.5 % of the weight of these compounds in 10% of the weight of an ethanol water solution was 7-7.5.

[0017] The germicidal action of the solution which added and prepared the 0.5 % of the weight of the above-mentioned dicarboxylic acid salts in 10% of the weight of the ethanol water solution was investigated by the antimicrobial-activity trial. The result is shown in Table 2. From this, reduction in number of microorganism was clearly accepted to 10% of the weight of the ethanol solution of contrast of both malonic-acid 2Na, succinic-acid Na, methylmalonic acid Na, maleic-acid Na, fumaric-acid Na, glutaric-acid Na, glutamic-acid Na adipic-acid Na pimelic-acid Na and suberic-acid Na.

[0018] the place which carried out the usual patch test by 25 panelists about these samples -- it is negative altogether and the skin stimulus was not accepted.

[0019] The germicidal action of a 0.5-% of the weight solution of the dicarboxylic acid salt of the carbon numbers 2-8 example of comparison 1 ethanol, and whose dicarboxylic acid salt additive-free contrast and ethanol are not contained was investigated by the antimicrobial-activity trial. The result is

shown in Table 2. By the dicarboxylic acid salt independent of carbon numbers 2-8, the germicidal action did not have private seals than this.

[0020] As an example of comparison 2 sample-offering sample, the acetic acid Na and n-butanoic acid Na of a monocarboxylic acid salt were used instead of the dicarboxylic acid salt. The germicidal action of the solution which added and prepared the 0.5 % of the weight of the above-mentioned monocarboxylic acid salts in 10% of the weight of the ethanol solution was investigated by the antimicrobial-activity trial. The result is shown in Table 2. A facilitatory effect was not accepted in a monocarboxylic acid salt from this.

[0021] Azelaic-acid Na and dodecane diacid Na were used as a with a carbon numbers of nine or more dicarboxylic acid salt as an example of comparison 3 sample-offering sample. The germicidal action of the solution which added and prepared the 0.5 % of the weight of the above-mentioned dicarboxylic acid salts in 10% of the weight of the ethanol solution was investigated by the antimicrobial-activity trial. The result is shown in Table 2. From this, a facilitatory effect was not accepted in a with a carbon numbers of nine or more dicarboxylic acid salt.

[0022] The germicidal action of the solution which added and prepared 0.5 % of the weight, respectively of maleic-acid Na, malonic-acid Na, and methylmalonic acid Na was investigated by the antimicrobial-activity trial among the dicarboxylic acid salts of carbon numbers 2-8 in the ethanol water solution of 45 % of the weight of examples of a comparison. The result is shown in Table 2. From this, reduction in number of microorganism was clearly accepted by each to 5% of the weight of the ethanol solution of contrast.

[0023]

[Table 2]

	エタノール濃度	添加試料	生菌数			
			初発	6日後	14日後	30日後
比較例1	無添加	無添加	+++	+++	+++	+++
		マロン酸Na	+++	+++	+++	+++
		コハク酸Na	+++	+++	+++	+++
		メチルマロン酸Na	+++	+++	+++	+++
		マレイン酸Na	+++	+++	+++	+++
		フマル酸Na	+++	+++	+++	+++
		グルタル酸Na	+++	+++	+++	+++
		グルタミン酸Na	+++	+++	+++	+++
		アジピン酸Na	+++	+++	+++	+++
		ピメリン酸Na	+++	+++	+++	+++
		スベリン酸Na	+++	+++	+++	+++
実施例1	10%	無添加	+++	+++	++	+
		マロン酸Na	+++	++	+	-
		コハク酸Na	+++	++	++	-
		メチルマロン酸Na	+++	+	-	-
		マレイン酸Na	+++	++	+	-
		フマル酸Na	+++	++	-	-
		グルタル酸Na	+++	++	++	-
		グルタミン酸Na	+++	+++	-	-
		アジピン酸Na	+++	+++	+	-
		ピメリン酸Na	+++	+++	+	-
		スベリン酸Na	+++	++	-	-
比較例2	10%	酢酸Na n-酪酸Na	+++ +++	+++ +++	++ ++	+ +
比較例3	10%	アゼライン酸Na ドデカン二酸Na	+++ +++	+++ +++	++ ++	+ +
比較例4	5%	無添加 マレイン酸Na マロン酸Na メチルマロン酸Na	+++ +++ +++ +++	+++ +++ +++ +++	+++ ++ ++ ++	++ + + +
溶液のpH 7. 2±0. 2						

[0024] The cosmetics (a formula 1-lotion, formula 2-cream) which contain a dicarboxylic acid salt in a

lotion example 2 table 3 or given in Table 4 or a cream presentation were prepared with the conventional method, and the preservation-from-decay surplus force was investigated by the preservation-from-decay force trial. The result is shown in Table 5. From this, the preservation-from-decay force is being clearly improved by adding the dicarboxylic acid salt (malonic-acid Na, methylmalonic acid Na, maleic acid Ma) of carbon numbers 2-8.

[0025] the place which carried out the usual patch test by 25 panelists about these samples -- it is negative altogether and the skin stimulus was not accepted.

[0026]

[Table 3]

組 成	配合濃度 (重量%)
エタノール	8. 0
ポリキシエチレン・オキシステア	
リン酸モノトリグリセライド	0. 1
グリセリン	5. 0
コラーゲン	0. 5
リン酸二水素カリウム	0. 0 7
リン酸二ナトリウム	0. 0 3
試料	0. 5
純水	To 1 0 0. 0
pH 7. 3	

[0027]

[Table 4]

組 成	配合濃度
油 相 成 分	(重量%)
モノステアリン酸	
ポリエチレングリコール	3.0
パルミチン酸セチル	10.0
オクタン酸セチル	5.0
流動パラフィン	5.0
ステアリン酸	10.0
セタノール	3.0
パラフィンワックス	3.0
水 相 成 分	(重量%)
ホウ砂	0.5
エタノール	5.0
試料	0.5
純水	To 100.0
pH 7.2	

[0028]

[Table 5]

処方	供試菌株	添加試料	生菌数			
			初発	7日後	14日後	30日後
1	細菌・酵母類	無添加	++	++	+	+
		メチルマロン酸Na	++	-	-	-
		マレイン酸Na	++	+	-	-
		n-酪酸Na	++	++	+	+
1	真菌	無添加	++	+	+	+
		メチルマロン酸Na	++	+	+	-
		マレイン酸Na	++	+	+	-
		n-酪酸Na	++	++	+	+
2	細菌・酵母類	無添加	++	++	+	+
		メチルマロン酸Na	++	+	-	-
		マレイン酸Na	++	+	-	-
		n-酪酸Na	++	++	+	+
2	真菌類	無添加	++	++	+	+
		メチルマロン酸Na	++	+	+	-
		マレイン酸Na	++	+	+	-
		n-酪酸Na	++	++	+	+

[0029]

[Effect of the Invention] Like the above, it is clear that the cosmetics of the ethanol low content which hardly carries out the need of antiseptics or the preservatives, and does not have a skin stimulus can be offered by this invention.

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[Translation done.]